



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,432	12/07/2000	John A. Trezza	SLM08-US	9943
24222	7590	10/06/2003	EXAMINER	
MAINE & ASMUS			SEDIGHIAN, REZA	
100 MAIN STREET				
P O BOX 3445			ART UNIT	PAPER NUMBER
NASHUA, NH 03061-3445			2633	
DATE MAILED: 10/06/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/732,432	TREZZA, JOHN A.	
	Examiner	Art Unit	
	M. R. Sedighian	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 December 2000.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-16 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 07 December 2000 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____ .
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3, 4, 8</u> . | 6) <input type="checkbox"/> Other: _____ . |

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "mating fiber optic cables that are connected to a processing unit off-chip" and "a means for separating the mating fiber optic cables to enable connection to other fiber nodes" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specification does not describe about the means for separating the mating fiber optic cables to enable connection to other fiber nodes. Thus specification fails to enable a person skilled in the art to make and use the claimed invention as recited in claim 11.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 9 and 11-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 9, it recites the limitation "said array" in line 1. There is insufficient antecedent basis for this limitation in the claim.

As to claim 11, it is not clear what it means by "... a means for separating the mating fiber optic cables to enable connection to other fiber nodes; and ...". What is the means for separating the fiber optic cables??

As to claim 15, it is not clear what it means by "... said mating fiber optic cables connect to a processing unit off-chip". Specification describes about an off-chip interface that can be implemented in several ways (Page 17, line 17), or multiple nodes that are accessed to an off-chip interface (Page 17, lines 18-19). What does it mean by fiber optic cables that are connect to a processing unit off-chip?? Which device is the off-chip processor unit?? Which fibers are connected to an off-chip processing unit??

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 4-6, and 9-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Delcoco et al. (US Patent No: 5,127,067).

Regarding claims 1, and 11 as it is understood in view of above 112, Delcoco teaches a star network device (col. 2, lines 53-54 and fig. 2) as a central node (20, fig. 2) on an integrated circuit (col. 4, line 20) for transmitting optical data (col. 4, lines 1-2) to a plurality of optical transmission lines (16, fig. 2), and to a plurality of secondary nodes (12b, 12c, fig. 2), comprising: a plurality of optical transmitting means (24a, 24b, fig. 2) and optical receiving means (22a, 22b, fig. 2) attached to the central node (20, fig. 2), wherein there is a dedicated transmission means (24b, fig. 2) and a plurality of dedicated optical receiving means (22a, 22b, 22c, fig. 2), a plurality of optical communication lines (16, fig. 2) and means for processing (28b, figs. 3, 4) the optical data using receiver reserved protocol (col. 4, lines 32-68, col. 5, lines 1-3).

Regarding claim 2, Delcoco teaches there is a one-to-one correspondence between the optical transmission lines (16, fig. 2) and the transmitting and receiving means (note there is a transmission line 16 for each transmitter 24 and for each receiver 22).

Regarding claim 4, Delcoco teaches the central node is subdivided into a plurality of central sub-nodes (each pair of transmitting and receiving means in the central node 20 can make a central sub-node, for example transmitter 24a and receiver 22a can make a central sub-node).

Regarding claim 5, Delcoco teaches the processing means contains first-in-first-out buffer (col. 5, lines 1-3).

Regarding claim 6, Delcoco teaches the secondary nodes are leaf nodes (12a, 12b, 12c, 12d, fig. 2).

Regarding claim 9, Delcoco teaches bi-directionally sending and receiving optical data (the plurality of transmitters 24 and receivers 22 can provide a bi-directional optical data communication).

Regarding claim 10, Delcoco teaches a means of routing data around a fault (col. 4, lines 51-65).

Regarding claims 12-13, Delcoco teaches fiber optic cables (16, fig. 2) are connected to a plurality of central sub-nodes, or leaf nodes (12a, 12b, 12c, 12d, fig. 2).

Regarding claim 14, Delcoco teaches fiber optic cables are connected to form any of the topologies selected from group consisting of linear, tree, switched fabric, and ring (col. 3, lines 67-68, col. 4, lines 1-12).

Regarding claim 15, as it is understood in view of above 112 problem, Delcoco teaches fiber optic cables (16, fig. 2) are connected to a processing unit (note that optical fibers 16 are connected to respective receivers 22 that is further connected to a multiplexer 28, shown in figs. 3, 4).

Regarding claim 16, Delcoco teaches central node (20, fig. 2) and a plurality of leaf nodes (12a, 12b, 12c, fig. 2).

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Delcoco et al. (US Patent No: 5,127,067) in view of Husbands et al. (US Patent No: 4,781,427).

Regarding claim 3, Delcoco differs from the claimed invention in that Delcoco does not specifically disclose the optical transmitting means are light emitting diodes. Husband teaches a

star node that consists of a pair of transmissive optical star couplers and active LED (30, fig. 4) and PIN diode (32, fig. 4) transmitter/receiver modules (col. 1, lines 58-62). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate light emitting diodes such as the ones of Husbands for the optical transmitters in the optical data transmission system of Delcoco in order to provide a high intensity illumination with lower power requirement.

10. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delcoco et al. (US Patent No: 5,127,067) in view of Johnson (US Patent No: 5,903,370), or Wu (US patent No: 5,442,623).

Regarding claims 7-8, Delcoco differs from the claimed invention in that Delcoco does not disclose the secondary nodes are additional central nodes, or the secondary nodes are a combination of additional central nodes and leaf nodes. Delcoco teaches a plurality of nodes 12 (or secondary nodes 12) that are communicating with a central node 20 in different configuration (12, fig. 2 and figs. 7A, 7B, 7C). As to secondary nodes to be additional central nodes, or a combination of additional central nodes and leaf nodes, Delcoco teaches a star and ring configurations for the nodes (or secondary nodes) and the central node. A particular type of configuration for the nodes and the central node such as nodes that are additional central nodes, or nodes that are a combination of additional central nodes and leaf nodes, are merely a matter of design choice. Johnson teaches an optical transmission system (fig. 5A), wherein each center node (51, 52, 53, 54, fig. 5A) is connected to a leaf node (45, fig. 5A). Likewise, Wu teaches an optical transmission system (figs. 8, 15), wherein central nodes (415, 425, 435, fig. 8) are

connected to leaf nodes (410, 420, 430, fig. 8). Therefore, it would have been obvious to an artisan at the time of invention to provide different configurations for a central node and ring nodes, as it is taught by Johnson or Wu, for the optical data transmission system of Delcoco in order to transmit and receive optical data signals in a plurality of different configurations.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (703) 308-9063. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

m. r. sedil
M. R. SEDIGHIAN
Patent Examiner
Art Unit: 2633